Academia de Studii Economice din Bucureşti
Facultatea de Cibernetică, Statistică şi Informatică Economică
Departamentul de Matematici Aplicate

RAPORT DE CERCETARE

Perioada: 1.01.2015 – 31.12.2016

1. LUCRĂRI PUBLICATE

1.1. Articole publicate în reviste străine cotate ISI

1. Claudianor O. Alves, **Dragoş-Pătru Covei,** (2015) *Existence of solution for a class of nonlocal elliptic problem via sub–supersolution method*, Nonlinear Analysis: Real World Applications, 23, 1-8, ISSN 1468-1218.
2. **Dragoş-Pătru Covei,** (2016) *Existence of positive entire radial solutions to a (k_1,k_2)-Hessian systems with convection terms*, Electronic Journal of Differential Equations, 2016, 272, 1-8, ISSN 1072-6691.
3. Vasile Preda, **Silvia Dedu,** Carmen Gheorghe, (2015) *New classes of Lorenz curves by maximizing Tsallis entropy under mean and Gini equality and inequality constraints*, Physica A, 436, 925-932, ISSN 0378-4371.
4. **Cristinca Fulga,** (2016) *Portfolio optimization under loss aversion,* European Journal of Operational Research, Elsevier, 251(1), 310-322, ISSN: 0377-2217.
5. **Cristinca Fulga,** (2016) *Portfolio optimization with disutility-based risk measure*, European Journal of Operational Research, Elsevier, 251(2), 541–553, ISSN: 0377-2217.
6. A. M. Mitu, T. Sireteanu, **Marius Giuclea**, **Ovidiu Solomon**, (2016) *Simulation of wide-sense stationary random time-series with specified spectral densities*, Journal of Vibration and Acoustics, 138, 3, ISSN 1048-9002.
7. A. M. Mitu, T. Sireteanu, **Marius Giuclea**, **Ovidiu Solomon**, (2016) *Statistical linearization of hysteretic systems described by the Ramberg-Osgood model*, Journal of Engineering Mechanics, 142, 9, ISSN 0733-9399.
8. **Bogdan Iftimie**, Monique Jeanblanc, Thomas Lim, (2016) *Optimization problem under change of regime of interest rate*, Stochastics and Dynamics, 16, 5, 1-31, ISSN 0219-4937.
9. **Aida Toma**, Samuela Leoni-Aubin, (2015) *Robust portfolio optimization using pseudodistances,* PLoS ONE, 10, 10, 1-26, ISSN 1932-6203.

1.2. Articole publicate în reviste româneşti cotate ISI cu factor de impact

1. **Silvia Dedu,** (2015) *A new risk assessment and optimization model with applications to insurance*, Economic Computation and Economic Cybernetics Studies and Research, 49, 2, 129-142, ISSN 0424-267X.
2. Vasile Preda, **Silvia Dedu,** Muhammad Sheraz, (2016) *Second order entropy approach for risk models involving truncation and censoring*, Proceedings of the Romanian Academy, 17, 3, 195-202, ISSN 1454-9069.
3. **Bogdan Iftimie**, S.M. Chiru, (2016) *Macroeconomic performances under inflation targeting. The case of Romania,* Economic Computation and Economic Cybernetics Studies and Research, 50, 3, 193-209, ISSN 0424-267X.
4. **Florentin Şerban**, Adrian Costea, Massimiliano Ferrara, (2015) *Portfolio optimization using interval analysis*, Economic Computation and Economic Cybernetics Studies and Research, 48, 1, 125-137, ISSN 0424-267X.

1.3. Articole publicate în reviste româneşti cotate ISI fără factor de impact

1.4. Articole publicate în reviste indexate în baze de date internaţionale

1. **Silvia Dedu, Florentin Şerban**, (2015) *Stochastic optimization using interval analysis, with applications to portfolio selection*, Journal of Applied Quantitative Methods, 10, 1, 30-35, ISSN 1842-4562.
2. **Cristinca Fulga,** (2015) *Integrated bi-criteria decision support system for portfolio selection,* Journal of Decision Systems, Taylor & Francis, 24, 2, 159-177, ISSN: 1246-0125.
3. V. Damian, **Daniela Ijacu**, (2016) *Stochastic flows associated to Stratonovich curve-line integrals,* Random Operators and Stochastic Ecuations*,* 24, 4, 215-223, ISSN 0926-6364.
4. **Cristina-Liliana Pripoae,** G. T. Pripoae, (2016) *On the vertices of the elliptic curves*, Balkan Journal of Geometry and its Applications, 21, 2, 73-81, ISSN 1224-2780.

1.5. Articole publicate în volumele unor conferinţe

1. **Silvia Dedu, Aida Toma**, (2015) *An integrated risk measure and information theory approach for modeling financial data and solving decision making problems*, Procedia Economics and Finance, 22, 531-537, ISSN 2212-5671, Elsevier.
2. **Silvia Dedu, Florentin Şerban**, (2015) *Modeling financial data using risk measures with interval analysis approach*, Procedia Economics and Finance, 22, 610-617, ISSN 2212-5671, Elsevier.
3. **Silvia Dedu, Florentin Şerban**, (2015) *Multiobjective mean-risk models for optimization in finance and insurance*, Procedia Economics and Finance, 32, 973-980, ISSN 2212-5671, Elsevier.

4. Muhammad Sheraz, **Silvia Dedu,** Vasile Preda, (2015) *Entropy measures for assessing volatile markets*, Procedia Economics and Finance, 22, 655-662, ISSN 2212-5671, Elsevier.
5. **Luiza Bădin**, **Florentin Șerban**, Anca Teodora Șerban Oprescu, **Silvia Dedu**, (2016) *Reflecting on Romanian universities ranking: an entropy-based approach to evaluate scientific research*, Proceedings of the 15th International Conference on Informatics in Economy (IE 2016), Education, Research & Business Technologies, 2016, 403-408, ISSN 2284-7472.
6. Cristiana Tudor, **Maria Tudor**, Andrei Anghel, (2015) *Carbon dioxide emissions' evolution in Eastern Europe after Doha: investigation and forecasting*, Management International Conference MIC 2015: Managing Sustainable Growth, ISSN 1854-4312.
7. Cristiana Tudor, **Maria Tudor**, (2016) *Global financial crisis, its impact on stock markets' linkages and portfolio diversification opportunities*, Proceedings of the 22nd International Academic Conference, Lisbon, ISBN 978-80-87927-21-2, ISSN 2336-5617.
8. Andrei Anghel, Cristiana Tudor, **Maria Tudor**, (2016) *An empirical investigation on the efficiency of the energy market through technical trading*, Management International Conference MIC 2016: Managing Global Changes, ISSN 1854-4312.

2. CĂRŢI PUBLICATE

2.1. Cărţi publicate în străinătate

1. Massimiliano Ferrara, Daniel Ştefan Armeanu, **Florentin Şerban**, Maria Viorica Ştefănescu, **Silvia Cristina Dedu,** (2016) *Portfolio optimization,* Aracne Editrice, pg. 180, ISBN 978-88-548-9491-4.

2.2. Cărţi publicate în ţară

1. **Virginia Atanasiu**, (2015) *Elemente de teoria grafurilor, de teoria jocurilor și de statistică matematică. Modele matematice în economie. Teorie și aplicaţii.* Editura ASE, Bucureşti, pg. 668, ISBN 978-606-505-865-1.
2. **Dragoş-Pătru Covei**, (2015) *Elemente de algebra liniară*, Editura ASE*,* Bucureşti, pg. 181, ISBN: 978-606-505-860-6.
3. **Dragoş-Pătru Covei**, (2015) *Elemente de analiză matematică*, Editura ASE*,* Bucureşti, pg. 232, ISBN: 978-606-505-895-8.
4. **Silvia Dedu, Florentin Șerban,** (2016) *Matematici aplicate în economie*, Editura Tipogrup Press, pg. 287, ISBN: 978- 973-88332-5-8.
5. **Cristina-Liliana Pripoae,** (2015) *Metode de optimizare matematică cu aplicații în economie*, Editura ASE, București pg. 210, ISBN 978-606-505-899-6.
6. **Radu Șerban, Daniela Ijacu, Iulian Mircea,** (2015) *Algebra și analiză matematică. Teorie și aplicații*, Editura Corint, București, pg. 320, ISBN 978-606-8723-32-7.

2.3. Capitole în volume colective

1. Cristiana Tudor, **Maria Tudor**, (2016) *On using Monte Carlo simulations for project risk management*, in Managing Project Risks for Competitive Advantage in Changing Business Environments, Eds. C.N. Bodea, A. Purnus, M. Huemann and M. Hajdu, IGI Global, 150-173, ISBN 978-15-22503-35-4.

3. COMUNICĂRI ŞTIINŢIFICE

3.1. Comunicări la conferinţe internaţionale

1. **Luiza Bădin**, Valentin Patilea, Leopold Simar, *Confidence Intervals for Efficiency Scores in Non-Convex Technologies*, 8th International Conference on Computational and Methodological Statistics, CFE-Ercim, 11-14 December 2015, London, United Kingdom.
2. Anamaria Aldea, **Luiza Bădin**, Carmen Lipară, *Efficiency of Investment banks during the financial crisis: a conditional frontier analysis*, International Conference on Operations Research (OR 2015), 1 - 4 September 2015, Vienna, Austria.
3. **Luiza Bădin**, Valentin Patilea, Leopold Simar, *Confidence Intervals for Efficiency Scores in Non-Convex Technologies*, International Workshop on the Econometrics and Statistics of Efficiency Analysis: Recent Developments and Perspectives, 20-21 June 2015, Lecce, Italy.
4. **Luiza Bădin**, Cinzia Daraio, Leopold Simar, *Bandwidth Selection Issues for Nonparametric Conditional Efficiency Estimation: A Monte-Carlo Investigation*, 14th European Workshop on Efficiency and Productivity Analysis (EWEPA14), 15-18 June 2015, Helsinki, Finland.
5. **Luiza Bădin**, Cinzia Daraio, Leopold Simar, *Bandwidth Selection Issues for Nonparametric Conditional Efficiency Estimation: A Monte-Carlo Investigation*, The 9th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2016), 09-11 Decembrie 2016, Sevilla, Spania.
6. **Luiza Bădin, Florentin Șerban,** Anca Teodora Serban Oprescu, **Silvia Dedu,** *An integrative framework for evaluating scientific research,* 22nd International Conference on Computational Statistics, COMPSTAT 2016, 23-26 August 2016, Oviedo, Spania.
7. **Luiza Bădin**, **Silvia Dedu**, Anca Teodora Serban Oprescu, **Florentin Serban**, *On the anatomy of scientific research: evaluation, diagnosis, follow-up,* North-American Productivity Workshop IX, NAPW 2016, 15-18 June, Quebec City, Canada.
8. **Florentin Șerban, Silvia Dedu,** Anca Teodora Serban Oprescu, **Luiza Bădin,** *Scientific evaluation of academic research in EU countries,* The 10th International Conference on Applied Statistics, ICAS 2016, 3-4 Iunie 2016, Brașov, România.
9. **Luiza Bădin, Silvia Dedu,** Anca Teodora Serban Oprescu, **Florentin Șerban,** *An entropic approach to assess scientific research output,* 4th Stochastic Modeling Techniques and Data Analysis International Conference (SMTDA 2016), 1– 4 Iunie 2016, Valletta, Malta.
10. **Silvia Dedu,** Vasile Preda, Muhammad Sheraz, *New Lorenz curves by maximizing quadratic entropy under inequality constraints,* The 15th Conference of the Applied Stochastic Models

and Data Analysis International Society, 30 June - 4 July 2015, University of Piraeus, Greece.

11. **Silvia Dedu, Luiza Bădin, Florentin Şerban**, *A quantitative approach to assessing the performances of the research-development sector,* The 3rd International Conference Economic Scientific Research - Theoretical, Empirical and Practical Approaches, 3-4 December 2015, Bucharest, Romania.
12. **Silvia Dedu,** Vasile Preda, *The Power Log-Lindley distribution, with applications to lifetime data modeling*, The 19th International Congress on Insurance: Mathematics and Economics, 24-26 June 2015, Liverpool, United Kingdom.
13. **Luiza Bădin, Silvia Dedu, Florentin Şerban**, *A quantitative approach to assessing the main indicators from research-development activities using information measures,* The 9th International Conference on Applied Statistics, 13 November 2015, Bucharest, Romania.
14. **Florentin Şerban, Silvia Dedu,** *An entropy model for portfolio optimization,* The 15th Conference of the Applied Stochastic Models and Data Analysis International Society, 30 June - 4 July 2015, University of Piraeus, Greece.
15. **Florentin Şerban, Silvia Dedu,** *A maximization model for portfolio optimization using Shannon entropy,* The 12th Balkan Conference on Operational Research BALCOR 2015, 9-13 September 2015, Constanţa, Romania.
16. **Silvia Dedu,** Vasile Preda, Muhammad Sheraz, *Risk assessment and survival models involving truncated and censored random variables usinginformation measures,* The 4th Stochastic Modeling Techniques and Data Analysis International Conference, 1-4 June 2016, Valletta, Malta.
17. **Silvia Dedu,** *Weighted power type probability distributions. Statistical properties and applications*, XIII-éme Colloque Franco Roumain de Mathématiques Appliquées, 25-29 August 2016, Iaşi, Romania.
18. **Silvia Dedu,** Vasile Preda, *Information measures based approach to loss models and lifetime data,* International Workshop on Applied Probability, 20-23 June 2016, Toronto, Canada.
19. **Cristinca Fulga,** (2016) *AHP based portfolio selection with risk preference modeling*, The 22nd International Conference on Principles and Practice of Constraint Programming (CP 2016), 5 – 9 Septembrie 2016, Toulouse, Franta.
20. **Cristinca Fulga,** (2016) *Portfolio optimization and loss aversion*, Second International Workshop on Machine learning, Optimization and big Data (MOD 2016), 26 – 29 August 2016, Volterra, Italia.
21. **Cristinca Fulga,** (2015) *Downside Risk and Portfolio Optimization under Loss Averse Preferences*, The 27th European Conference on Operational Research (EURO XXVII), 12 – 15 July 2015, Glasgow, Scotland.
22. **Cristinca Fulga,** (2015) *Preferences in Mean-Risk Portfolio Optimization*, The 13th EUROPT Workshop on Advances in Continuous Optimization (EUROPT XIII), 8 – 10 July 2015, Edinburgh, Scotland.
23. **Cristinca Fulga,** (2015) *Portfolio optimization in the downside risk framework with loss aversion,* The International Conference on Operations Research – Big Data & Optimal Decisions (OR 2015), 1 – 4 Septembrie 2015, Vienna, Austria.
24. **Cristinca Fulga,** (2015) *Downside Risk and Portfolio Optimization under Loss Averse Preferences*, The 23rd International Conference on Multiple Criteria Decision Making – Bridging Disciplines (MCDM 2015), 2 – 7 August 2015, Hamburg, Germany.

25. **Florentin Şerban,** Anca Teodora Serban Oprescu, *An assessment of scientific research performance for ranking countries from EU,* The 22nd International Conference on Computational Statistics, 23-26 August 2016, Oviedo, Spain.
26. **Aida Toma**, Amor Keziou, *Empirical divergence estimates in moment condition models: robustness properties,* 16th Conference of the Applied Stochastic Models and Data Analysis International Society & Demographic Analysis and Research International Workshop, 30 Iunie - 4 Iulie 2015, Piraeus, Grecia
27. **Aida Toma**, Amor Keziou, *Empirical divergence estimates in moment condition models: robustness properties,* 8th International Conference of the ERCIM WG on Computational and Methodological Statistics (CM Statistics 2015), 12 - 14 Decembrie 2015, Senate House, University of London, Londra, Anglia. (Invited speaker la sesiunea speciala "Multivariate Analysis" organizata de Apostolos Batsidis)
28. **Aida Toma**, Amor Keziou, *Robust inference with minimum dual divergence estimators for moment condition models*, International Conference on Robust Statistics ICORS 2016, 4 - 8 Iulie 2016, Geneva, Switzerland.
29. **Aida Toma**, *Minimum dual divergence estimators for moment condition models*, XIIIeme Colloque Franco-Roumain de Mathematiques Appliquees, 25-29 August 2016, Iași, Romania. (Invited speaker la sesiunea speciala "Statistics" organizata de Cristian Preda si Celine Lacaux)
30. Cristiana Tudor, **Maria Tudor**, Andrei Anghel, *Carbon dioxide emissions' evolution in Eastern Europe after Doha: investigation and forecasting*, Management International Conference MIC 2015: Managing Sustainable Growth, 28-30 May 2015, Portoroz, Slovenia.
31. Cristiana Tudor, **Maria Tudor**, *Global financial crisis, its impact on stock markets' linkages and portfolio diversification opportunities*, The 22nd International Academic Conference, 22-25 March 2016, Lisbon, Portugal.
32. Andrei Anghel, Cristiana Tudor, **Maria Tudor**, *An empirical investigation on the efficiency of the energy market through technical trading*, Management International Conference MIC 2016: Managing Global Changes, 1-4 June 2016, Croatia.

3.2. Comunicări la conferinţe naţionale

1. **Luiza Bădin**, *Confidence intervals for efficiency scores in non-convex technologies*, 18th Conference of the Romanian Society of Probabilities and Statistics, 8 Mai 2015, București, România.
2. **Luiza Bădin**, Cinzia Daraio, Leopold Simar, *Optimal bandwidth selection in conditional frontier models: a Monte Carlo investigation,* 19th Conference of the Romanian Society of Probabilities and Statistics, 27-28 Mai 2016, București, România.
3. **Silvia Dedu,** Vasile Preda, *Optimization under various uncertainty measures for insurance and Stop-Loss reinsurance models,* A 18-a Conferinţă a Societăţii de Probabilităţi şi Statistică din România, 8 Mai 2015, Bucureşti, Romania.
4. **Silvia Dedu,** Muhammad Sheraz, *Information measure approach for risk models optimization,* A 19-a Conferinţă a Societăţii de Probabilităţi şi Statistică din România, 27-28 Mai 2016, Bucureşti, Romania.

5. **Silvia Dedu,** *Statistical models for assessing the quality of scientific research,* A 19-a Conferinţă a Societăţii de Probabilităţi şi Statistică din România, 27-28 Mai 2016, Bucureşti, Romania.
6. **Cristinca Fulga,** (2015) *Downside loss aversion. Application to portfolio optimization*, The 18th Conference of the Society of Probability and Statistics, 8 Mai 2015, Bucureşti, Romania.
7. **Cristinca Fulga,** (2016) *Portfolio selection with loss aversion and prior stock ranking based on AHP*, The 19th Conference of the Society of Probability and Statistics, 27-28 Mai 2016, Bucureşti, Romania.
8. **Florentin Şerban,** *Portfolio performance modeling using interval analysis,* A 18-a Conferinţă a Societăţii de Probabilităţi şi Statistică din România, 8 Mai 2015, Bucureşti, Romania.
9. **Florentin Şerban,** *Portfolio optimization models using entropy measures,* A 19-a Conferinţă a Societăţii de Probabilităţi şi Statistică din România, 27-28 Mai 2016, Bucureşti, Romania.
10. **Aida Toma**, Amor Keziou, *Empirical divergence estimates in moment condition models: robustness properties,* A 18-a Conferinţă a Societăţii de Probabilităţi şi Statistică din România, 8 Mai 2015, București, Romania.
11. **Aida Toma**, Amor Keziou, *Minimum dual divergence estimators for moment condition models: a Monte-Carlo simulation study*, A 19-a Conferinţă a Societăţii de Probabilităţi şi Statistică din România, 27-28 Mai 2016, București, Romania.
12. Andrei Anghel, **Maria Tudor**, Cristiana Tudor, *The relative impact of errors in covariances for portfolio optimization*, A 18-a Conferinţă a Societăţii de Probabilităţi şi Statistică din România, 8 Mai 2015, Bucureşti.
13. Andrei Anghel, **Maria Tudor**, Cristiana Tudor, *A bootstrap approach to identifying the relative importance of errors in estimates used in portfolio optimization*, A 19-a Conferinţă a Societăţii de Probabilităţi şi Statistică din România, 27-28 Mai 2016, Bucureşti.

3.3. Seminarii ştiinţifice susţinute